

2J6550BGFa

CELLULAR/LTE MIMO, 2.4/5.0 GHz ISM MIMO and GNSS

Key Features

Cable 1 and 2: CELLULAR / LTE

- 791-960 MHz
- 1710-2170 MHz
- 2500-2700 MHz

Cable 3 and 4: 2.4/5.0 GHz ISM

- 2410-2490 MHz
- 4920-5925 MHz

Cable 5: GPS/GLONASS/QZSS/Galileo

- 1575-1610 MHz

Screw Mount

Heavy Duty antenna

High Performance

Ground Plane Dependent

Anti-Rotation Mounting

Customizable Cable and Connector

Dimensions \varnothing 146 x 31.5 mm

Certificates: IK09



Note: This antenna is suitable only for European LTE frequency bands



1. Antenna and electrical specifications

Cable 1

Parameters	CELLULAR / LTE Antenna		
	4G LTE/FirstNet/LPWA/CAT-X/CAT-Mx/CAT-NBx/NB-IoT/3G/2G		
Standards			
Band (MHz)	800/850/900	1700/1800/1900/2100	2600
Frequency (MHz)	791-960	1710-2170	2500-2700
Return Loss (dB)	~-6.4	~-12.2	~-10.6
VSWR	~3.2:1	~1.7:1	~1.9:1
Efficiency (%)	~32.7	~40.1	~30.2
Peak Gain (dBi)	~-0.4	~2.4	~-0.7
Average Gain (dB)	~-5.0	~-4.1	~-5.4
Impedance (Ohm)	50		
Polarisation	Linear		
Radiation Pattern	Omni-Directional		
Max. Input Power (W)	25		
Connector Type	SMA-Male Standard (Other Connectors Available)		
Cable Length	200 cm Standard (Any Cable Length Available)		
Cable Type	LL100 (Other Cables Available)		

Cable 2

Parameters	CELLULAR / LTE Antenna		
	4G LTE/FirstNet/LPWA/CAT-X/CAT-Mx/CAT-NBx/NB-IoT/3G/2G		
Standards			
Band (MHz)	800/850/900	1700/1800/1900/2100	2600
Frequency (MHz)	791-960	1710-2170	2500-2700
Return Loss (dB)	~-6.7	~-12.1	~-11.5
VSWR	~3.0:1	~1.7:1	~1.8:1
Efficiency (%)	~28.2	~40.7	~30.5
Peak Gain (dBi)	~-1.4	~3.2	~1.0
Average Gain (dB)	~-6.9	~-4.1	~-5.4
Impedance (Ohm)	50		
Polarisation	Linear		
Radiation Pattern	Omni-Directional		
Max. Input Power (W)	25		
Connector Type	SMA-Male Standard (Other Connectors Available)		
Cable Length	200 cm Standard (Any Cable Length Available)		
Cable Type	LL100 (Other Cables Available)		

Antenna Measurement Conditions:

Mounted on Metal Plate of 30 x 30 cm
 200 cm of LMR195 Cable
 Measured in Certified CTIA 3D Anechoic Chamber

Cable 3

Parameters	2.4/5.0 GHz ISM Antenna	
	WiFi/Sigfox/LoRa/LPWA/Bluetooth/BLE/ZigBee/RFID/RPMA/ISM	
Standards	WiFi/Sigfox/LoRa/LPWA/Bluetooth/BLE/ZigBee/RFID/RPMA/ISM	
Band (MHz)	2.4 GHz	5.0 GHz
Frequency (MHz)	2410-2490	4920-5925
Return Loss (dB)	~-8.7	~-17.5
VSWR	~2.2:1	~1.4:1
Efficiency (%)	~16.4	~20.4
Peak Gain (dBi)	~-0.6	~1.0
Average Gain (dB)	~-7.9	~-7.0
Impedance (Ohm)	50	
Polarisation	Linear	
Radiation Pattern	Omni-Directional	
Max. Input Power (W)	25	
Connector Type	RP-SMA-Male Standard (Other Connectors Available)	
Cable Length	200 cm Standard (Any Cable Length Available)	
Cable Type	LL100 (Other Cables Available)	

Cable 4

Parameters	2.4/5.0 GHz ISM Antenna	
	WiFi/Sigfox/LoRa/LPWA/Bluetooth/BLE/ZigBee/RFID/RPMA/ISM	
Standards	WiFi/Sigfox/LoRa/LPWA/Bluetooth/BLE/ZigBee/RFID/RPMA/ISM	
Band (MHz)	2.4 GHz	5.0 GHz
Frequency (MHz)	2410-2490	4920-5925
Return Loss (dB)	~-10.2	~-18.2
VSWR	~2.0:1	~1.3:1
Efficiency (%)	~19.6	~22.4
Peak Gain (dBi)	~-0.3	~0.8
Average Gain (dB)	~-7.1	~-6.7
Impedance (Ohm)	50	
Polarisation	Linear	
Radiation Pattern	Omni-Directional	
Max. Input Power (W)	25	
Connector Type	RP-SMA-Male Standard (Other Connectors Available)	
Cable Length	200 cm Standard (Any Cable Length Available)	
Cable Type	LL100 (Other Cables Available)	

Antenna Measurement Conditions:

Mounted on Metal Plate of 30 x 30 cm
 200 cm of LMR195 Cable
 Measured in Certified CTIA 3D Anechoic Chamber

Cable 5

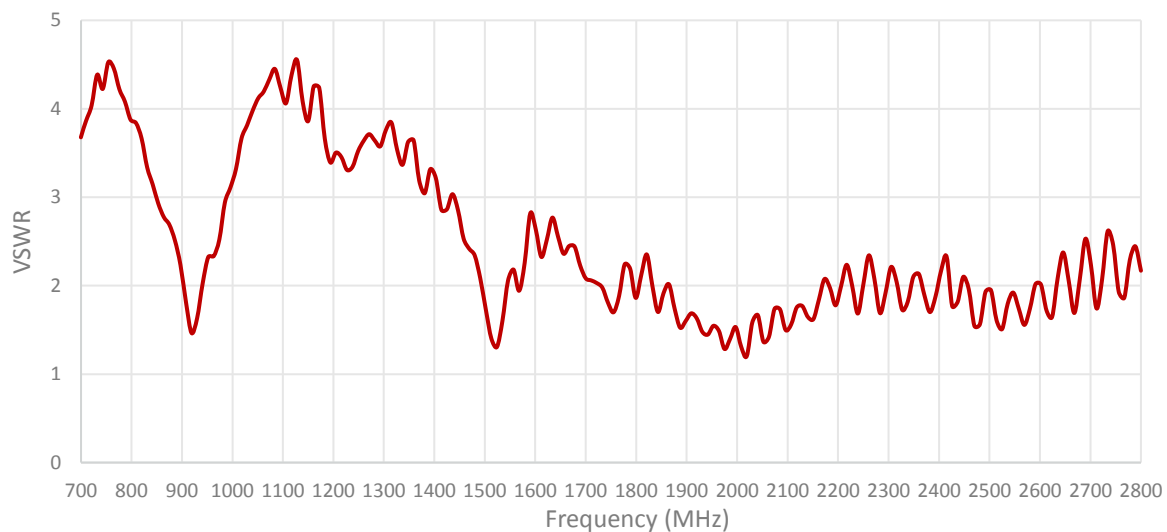
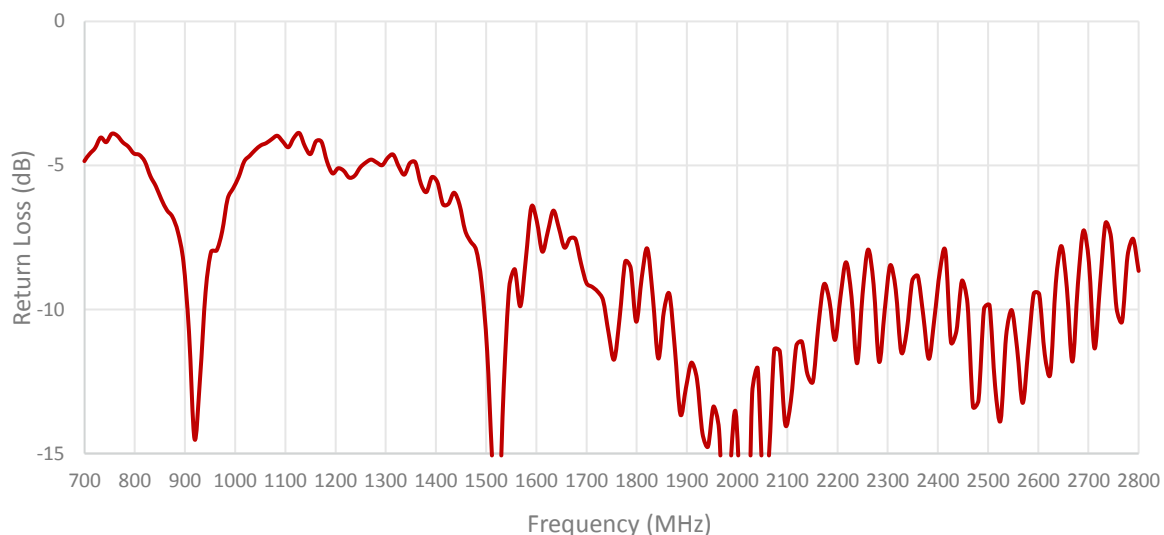
Parameters	GPS/GLONASS Antenna	
	GPS/QZSS/Galileo	GLONASS
Standards		
Band (MHz)	1575	1602
Frequency (Mhz)	1575.42	1598-1606
Patch Size (mm)	25 x 25 x 4	
Passive Gain (dBi)	~3.6	
Impedance (Ohms)	50	
Radiation Pattern	Hemispherical	
Voltage Range (V)	2.7 - 5.5	
Active Gain (dB)	23 @ 3V, 24 @ 5V	
Noise Figure (dB)	1.2	
Current Consumption (mA)	22 @ 5V	
Power Consumption (mW)	max 138mW	
Saw Filter Type	Post-Filter	
Connector Type	SMA-Male Standard (Other Connectors Available)	
Cable Length	300 cm Standard (Any Cable Length Available)	
Cable Type	LL100 Standard (Other Cables Available)	

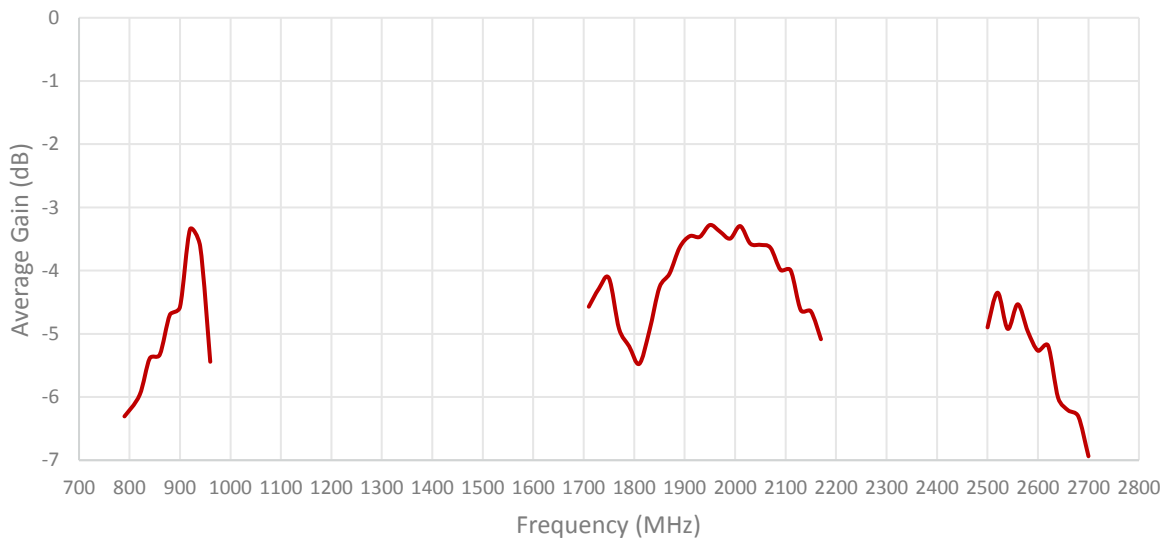
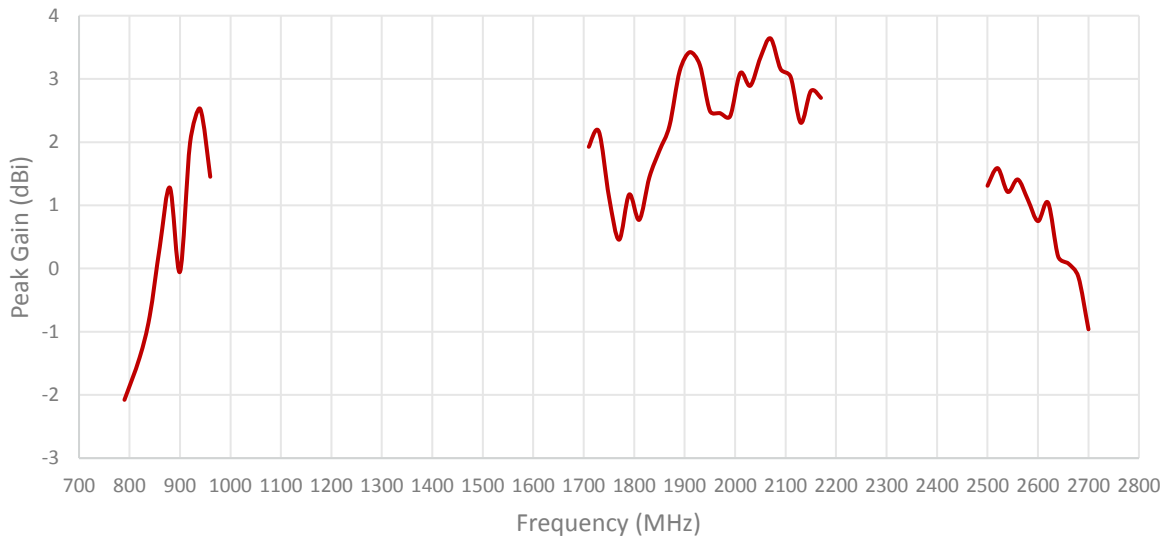
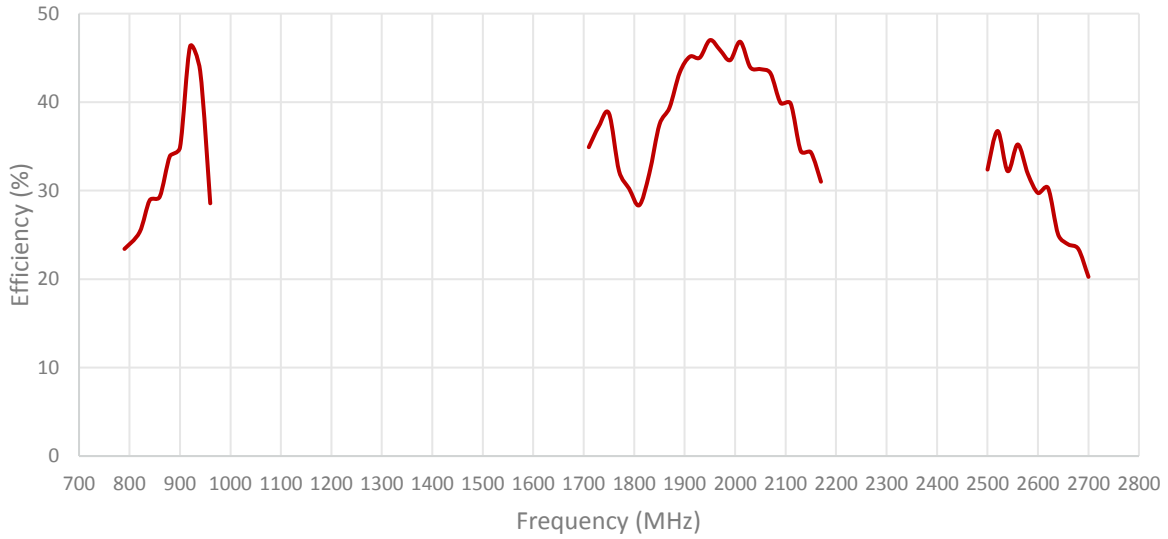
2. Mechanical and environmental specifications

Specifications	2J6550BGFa
Mounting Type	Screw Mount
Dimensions (mm)	Ø 146 x 31.5
Max. Tighten Torque (Nm)	6 Nm
Radome	ABS
Radome color	Black
Antenna Base	Zamak
Gasket	TPE
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Substance Compliance	RoHS
Certificates	IK09

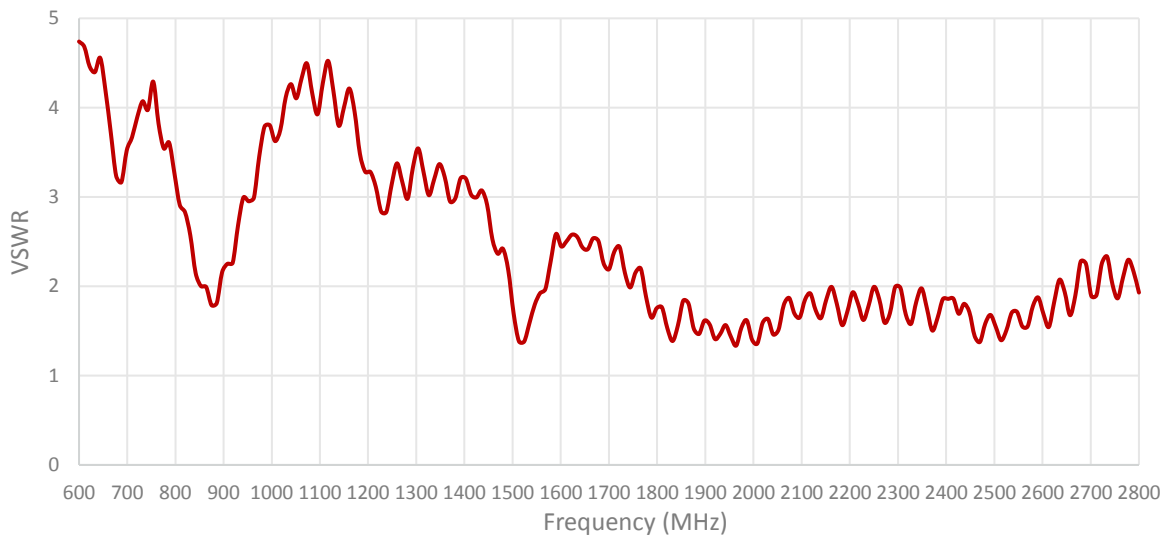
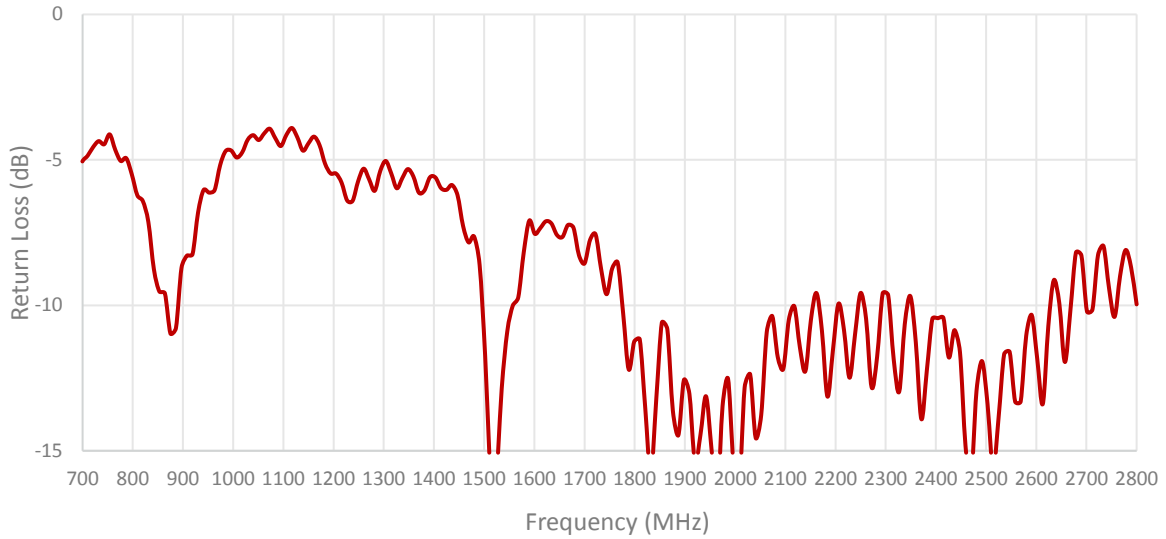
3. Antenna parameters

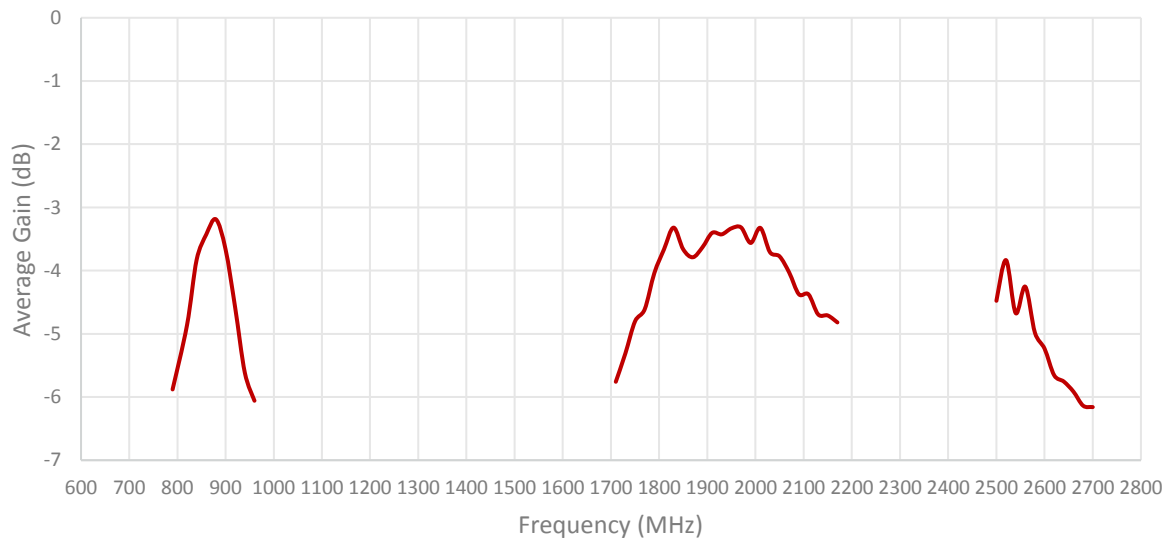
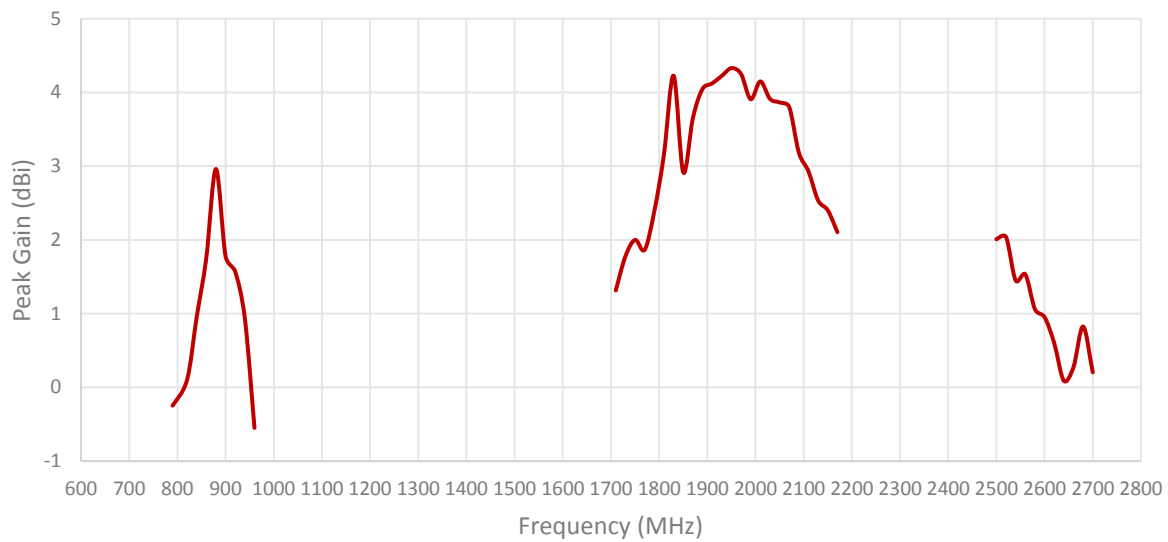
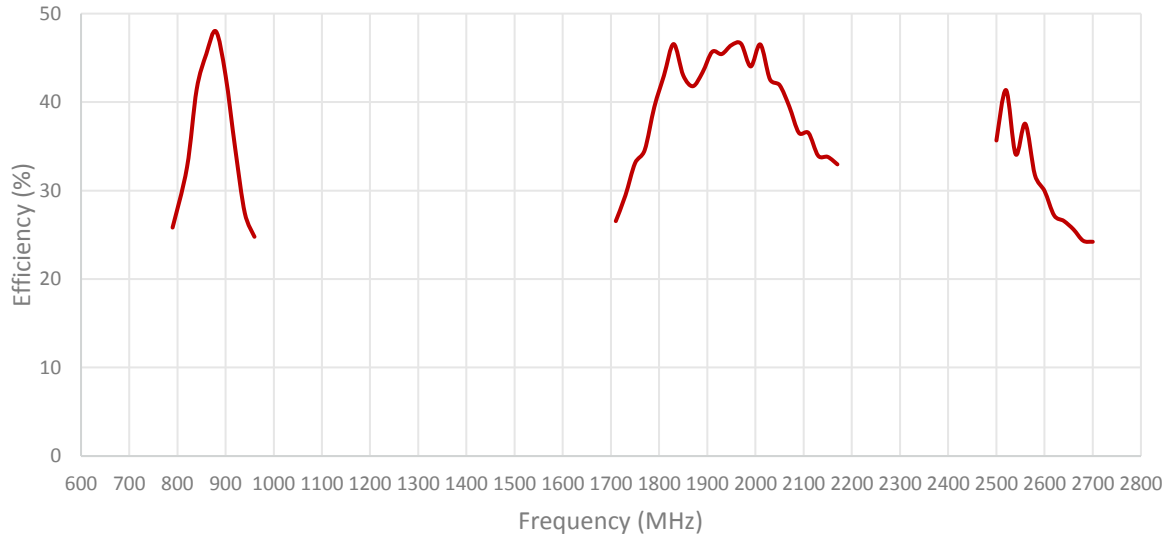
Table 1: CELLULAR/LTE



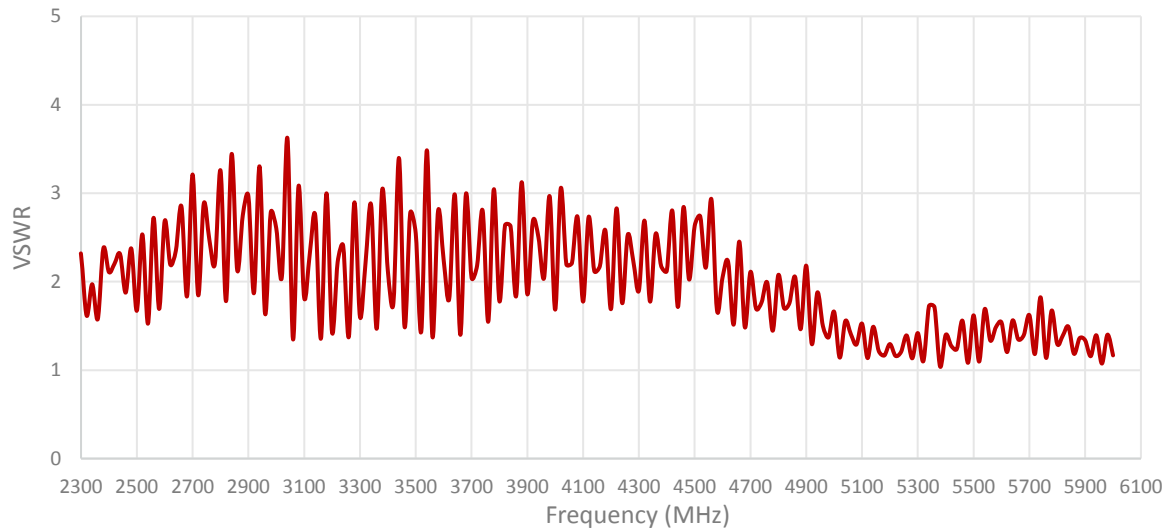
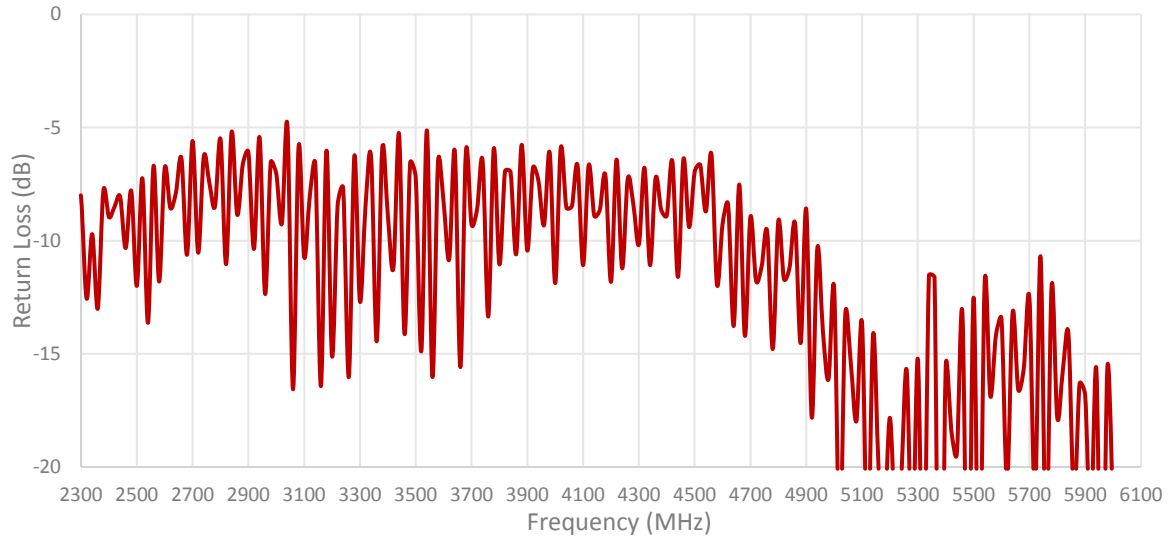


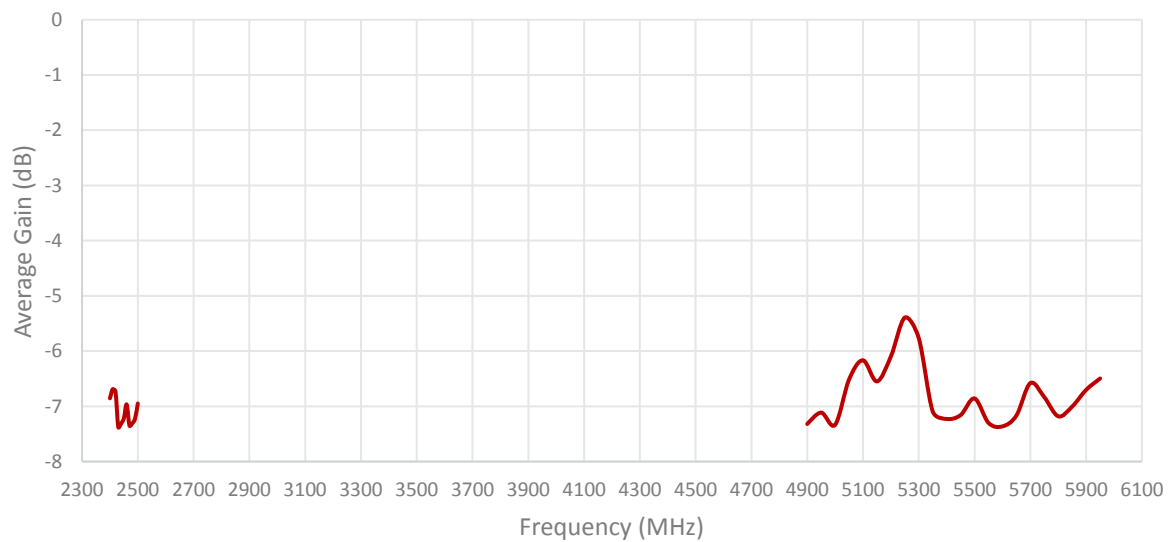
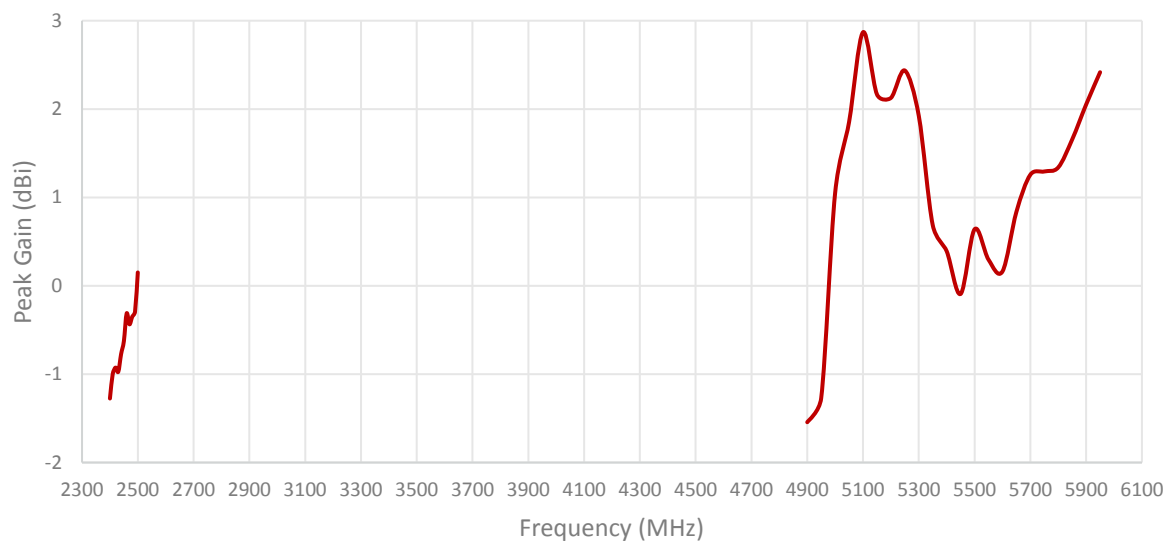
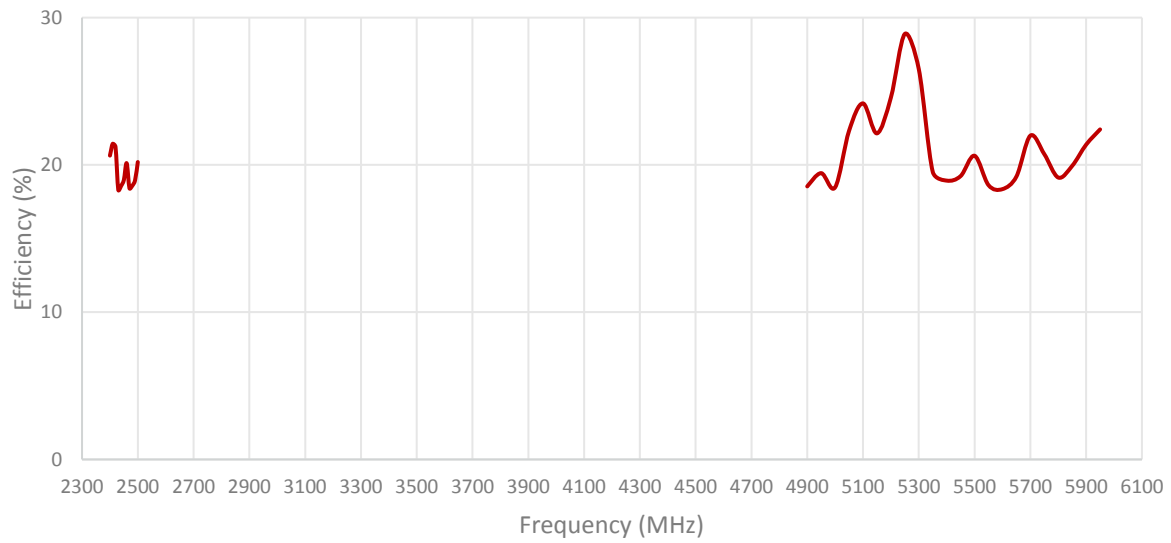
Cable 2: CELLULAR/LTE



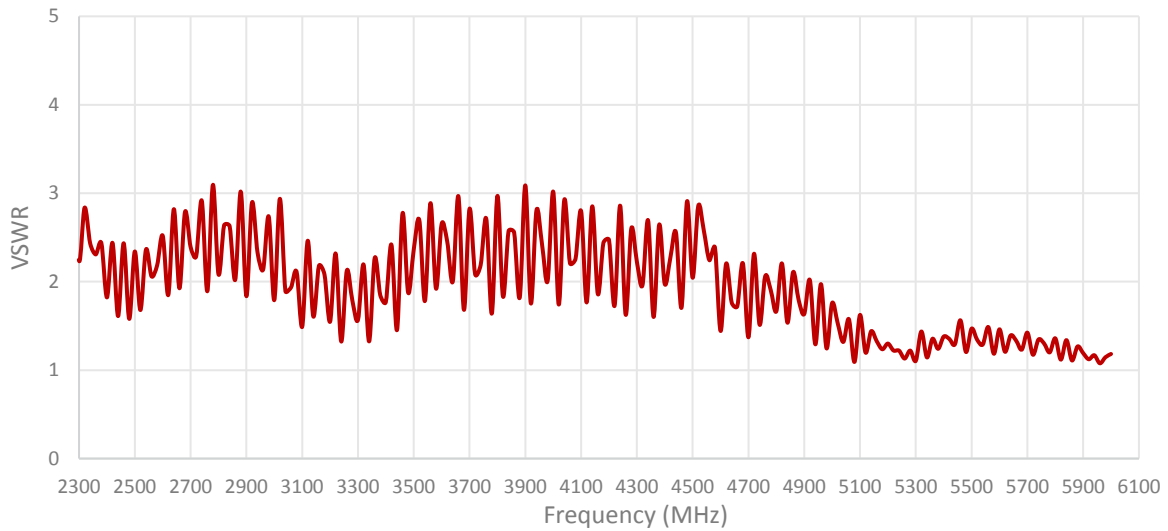
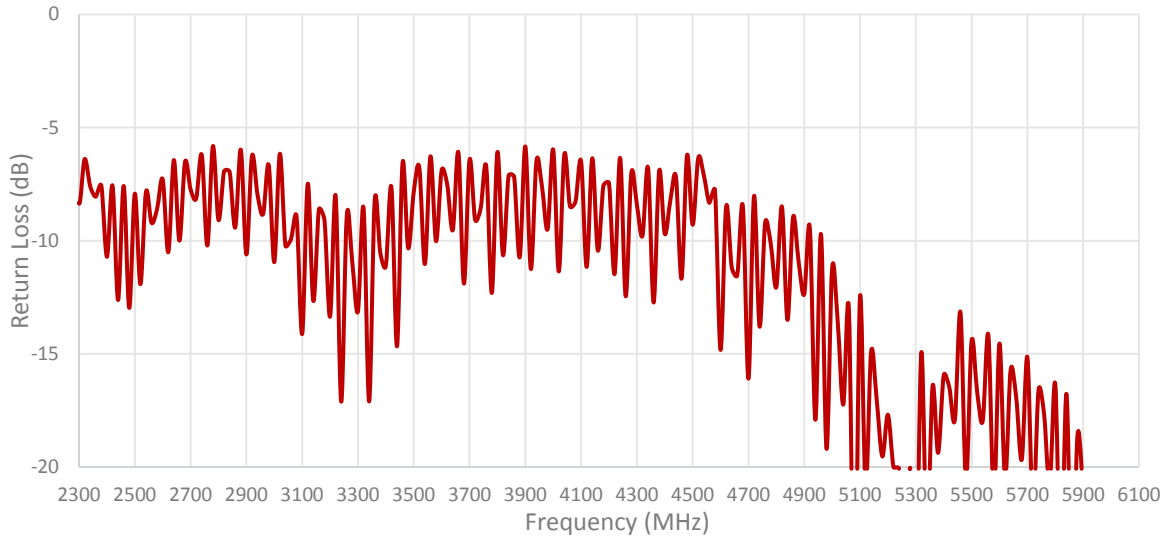


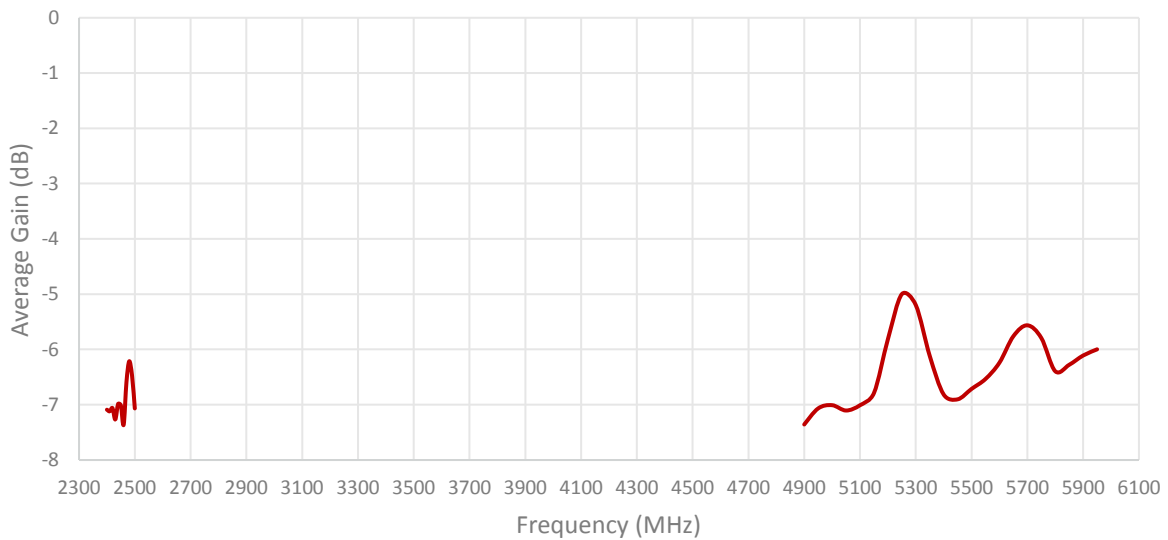
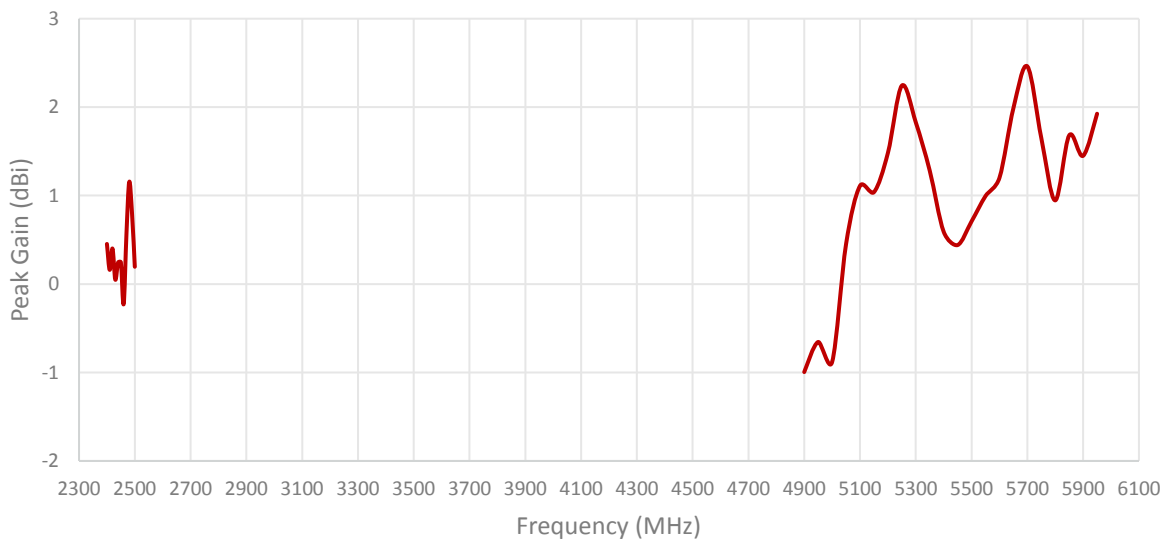
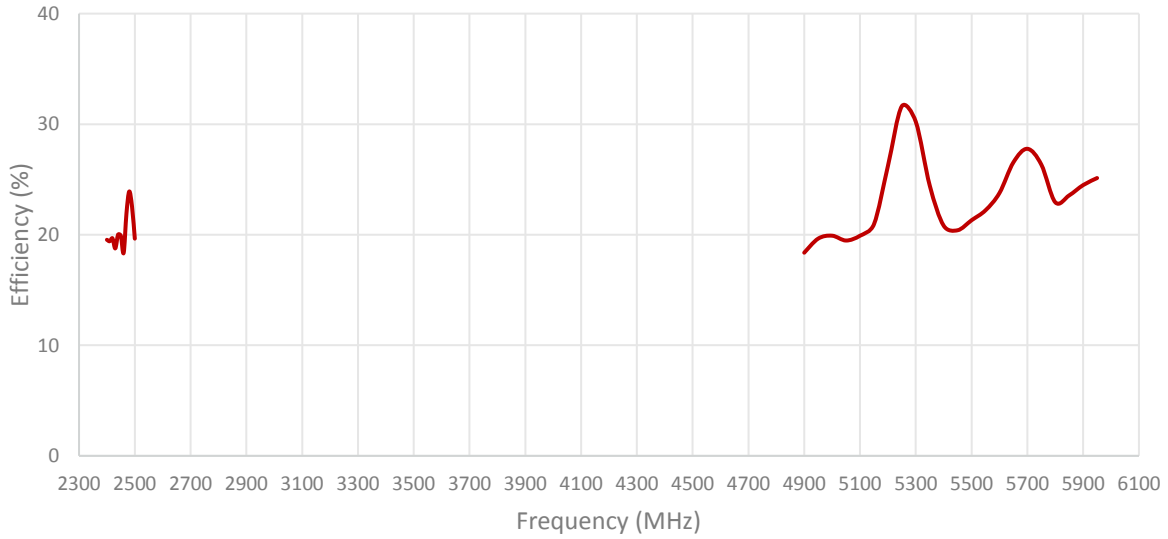
Cable 3: 2.4/5.0 GHz ISM



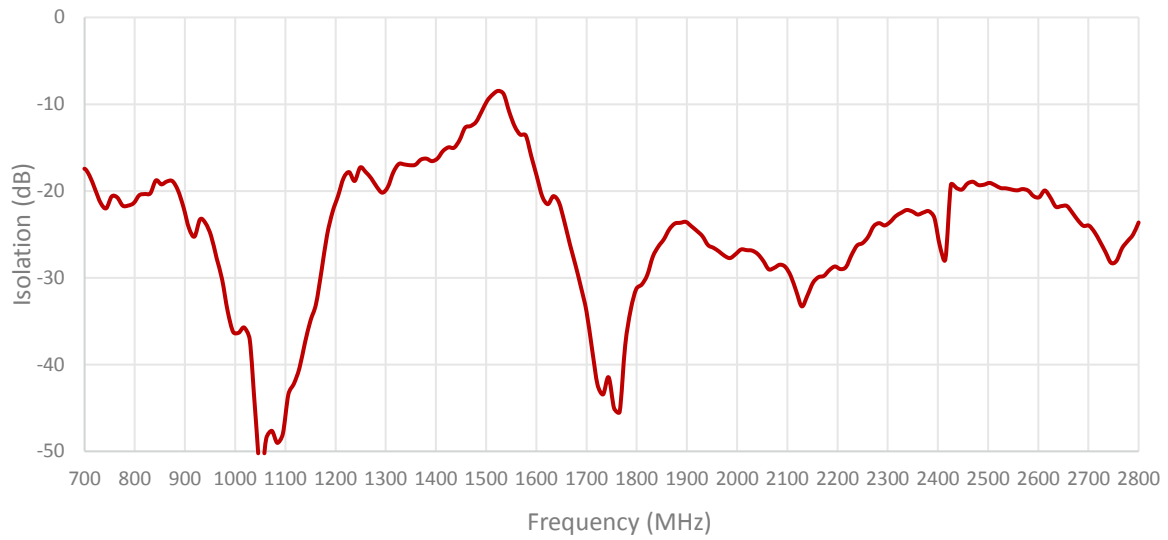


Cable 4: 2.4/5.0 GHz ISM

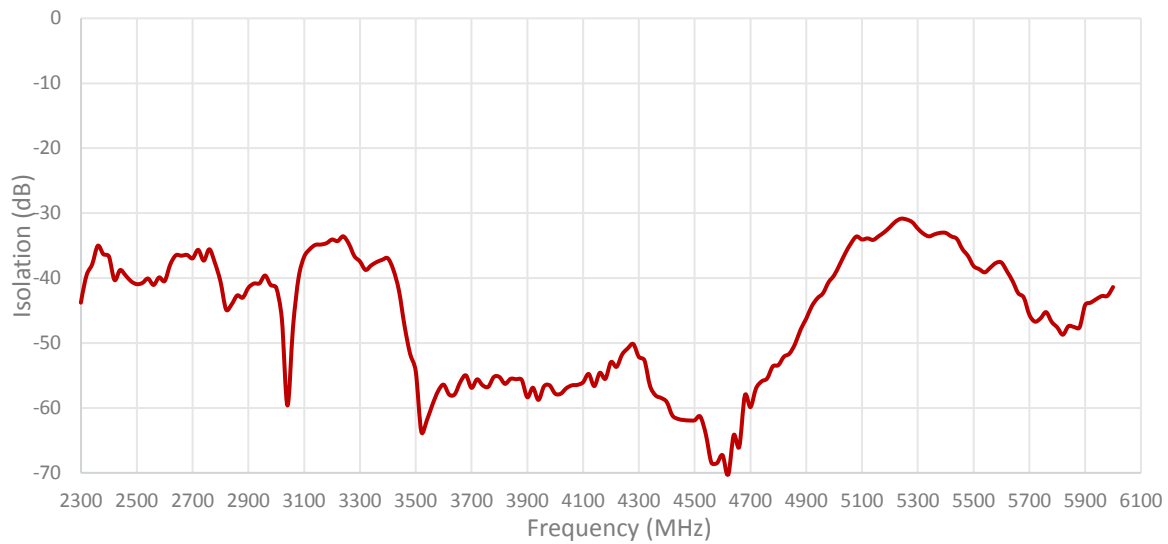




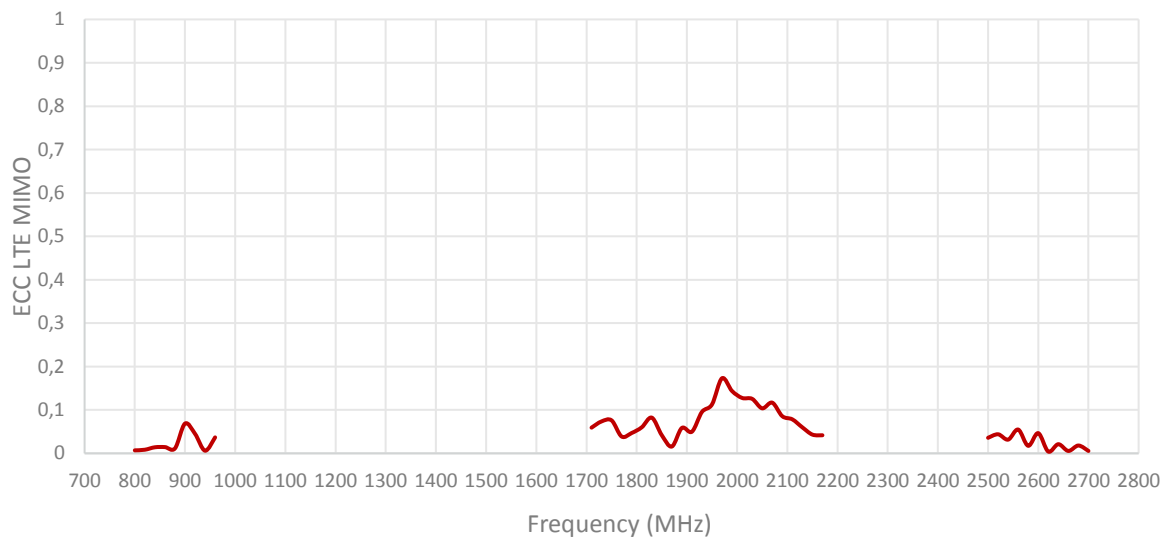
ISOLATION FOR CABLES 1 AND 2 (CELLULAR/LTE)



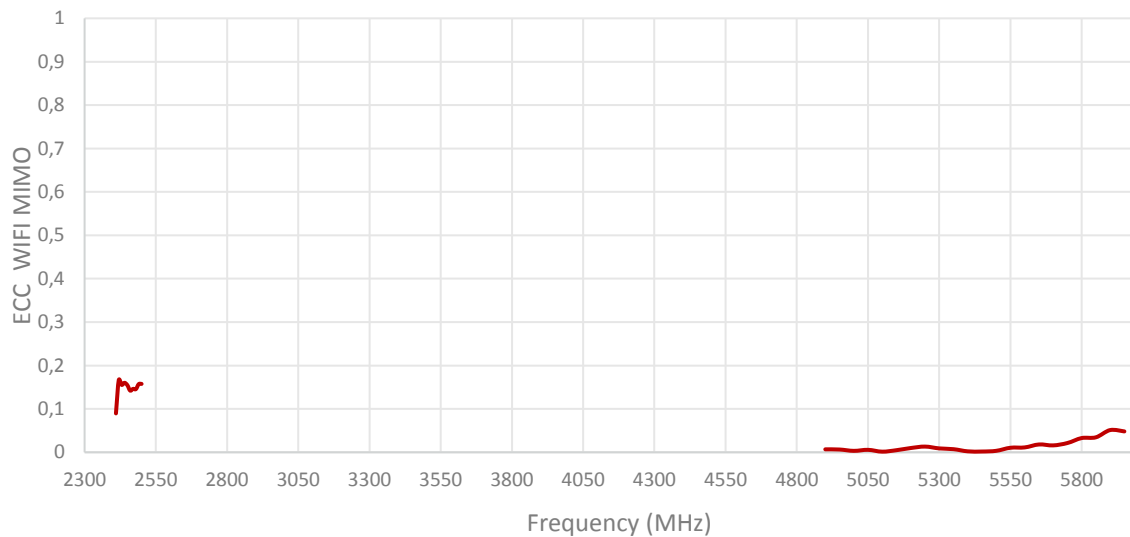
ISOLATION FOR CABLES 3 AND 4 (2.4/5.0 GHz ISM)

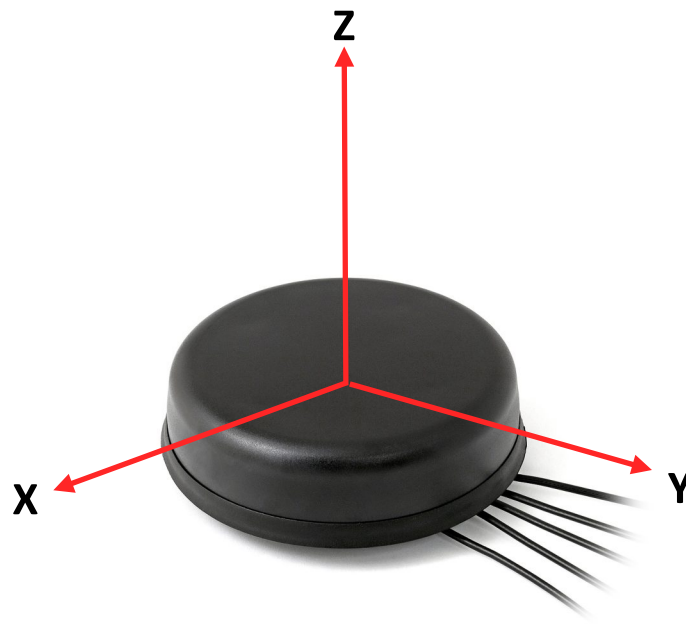


ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 2 (CELLULAR/LTE)



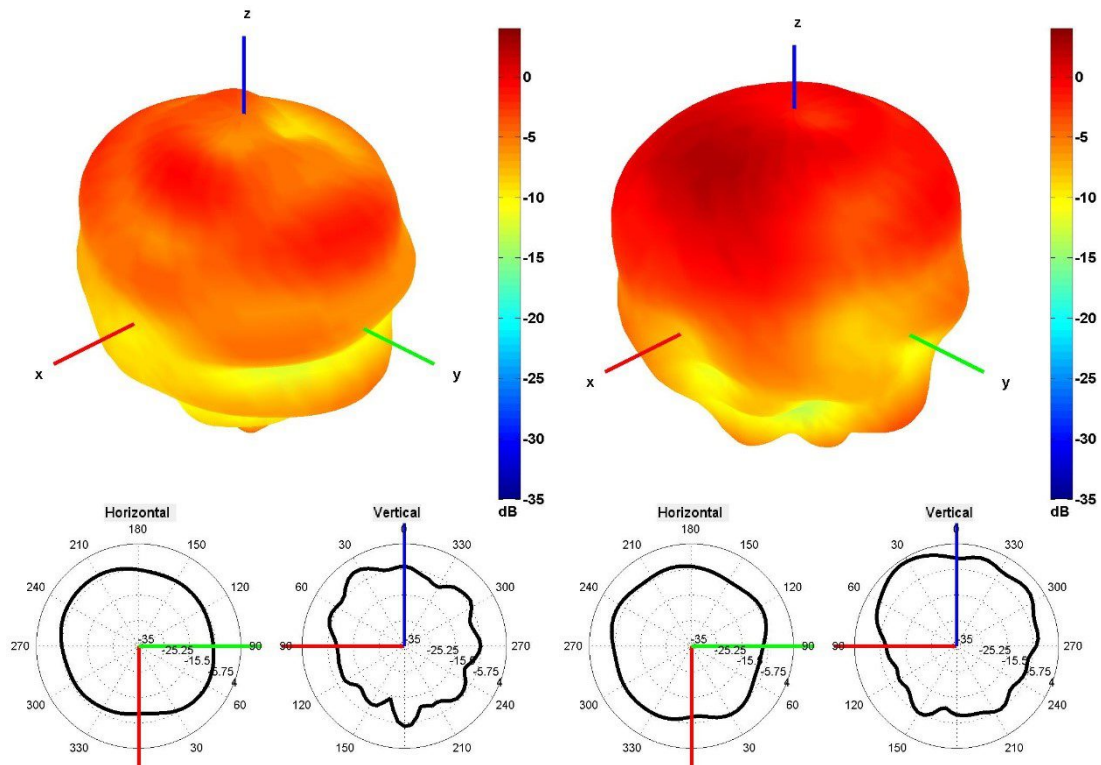
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 3 AND 4 (2.4/5.0 GHz ISM)



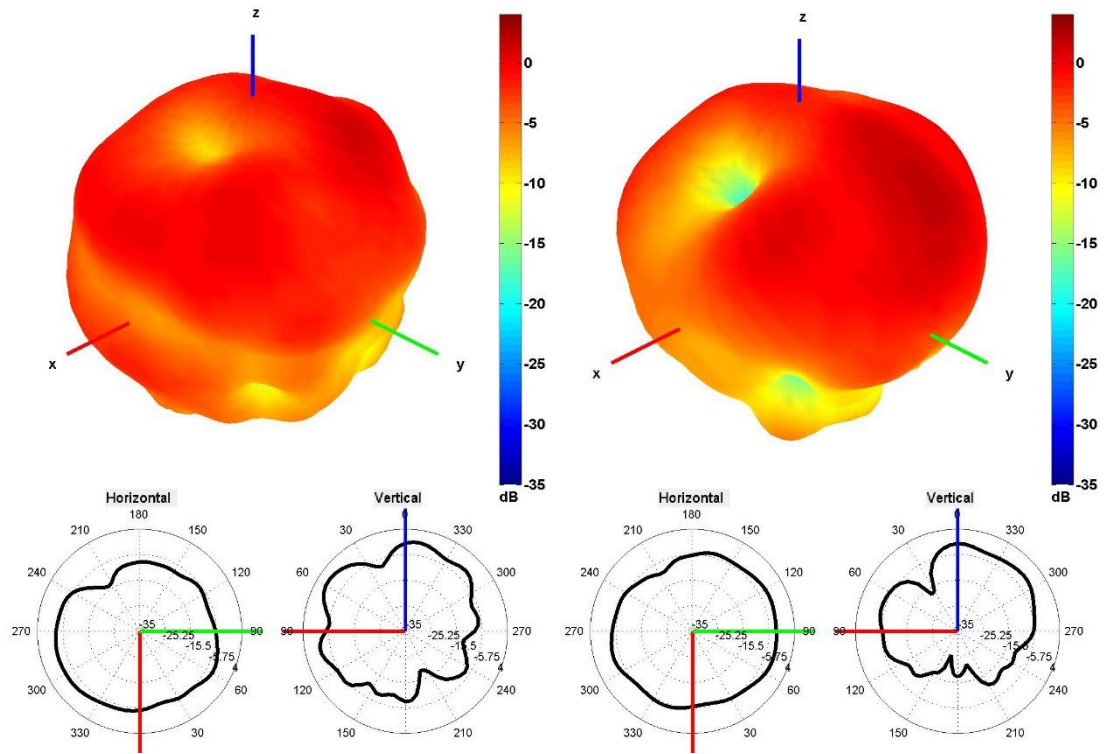


Radiation pattern reference

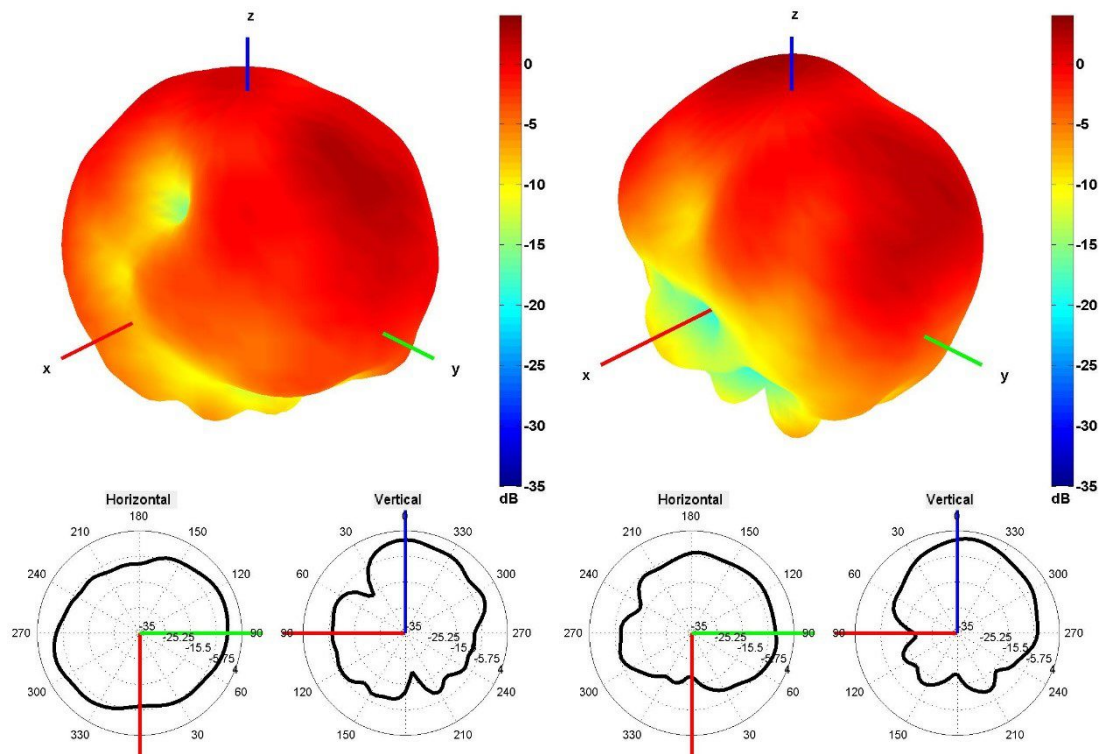
Cable 1: CELLULAR/LTE



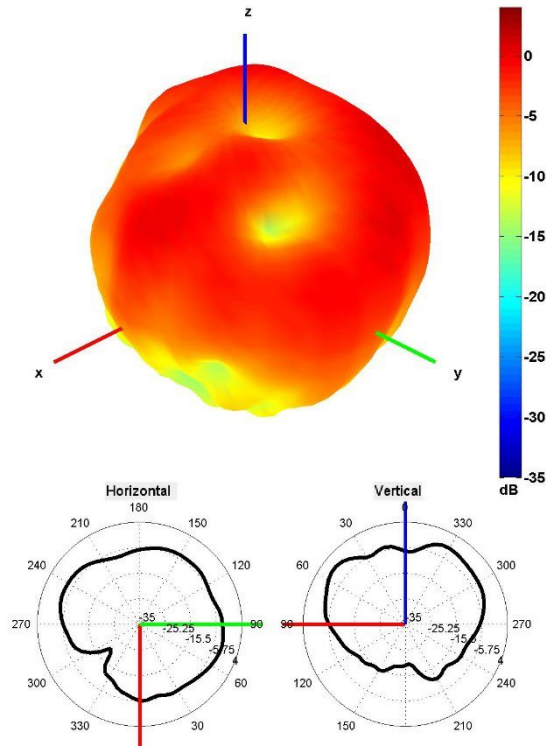
850 and 940 MHz Radiation pattern



1750 and 1850 MHz Radiation pattern

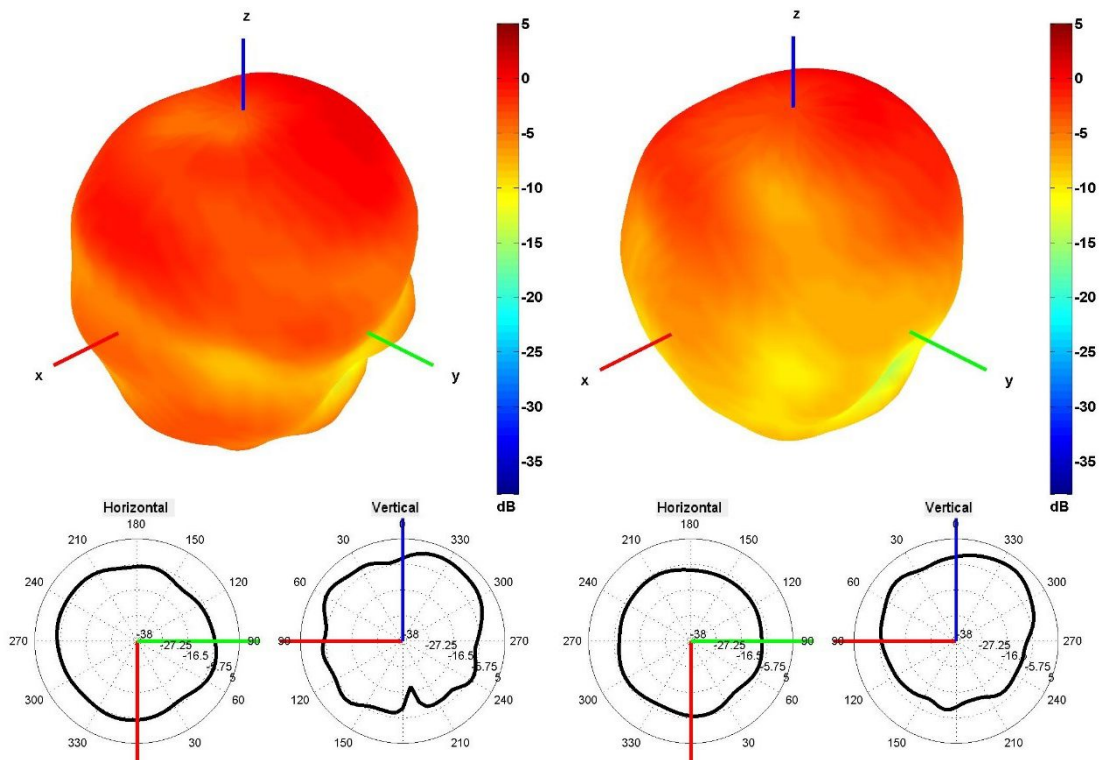


1950 and 2100 MHz Radiation pattern

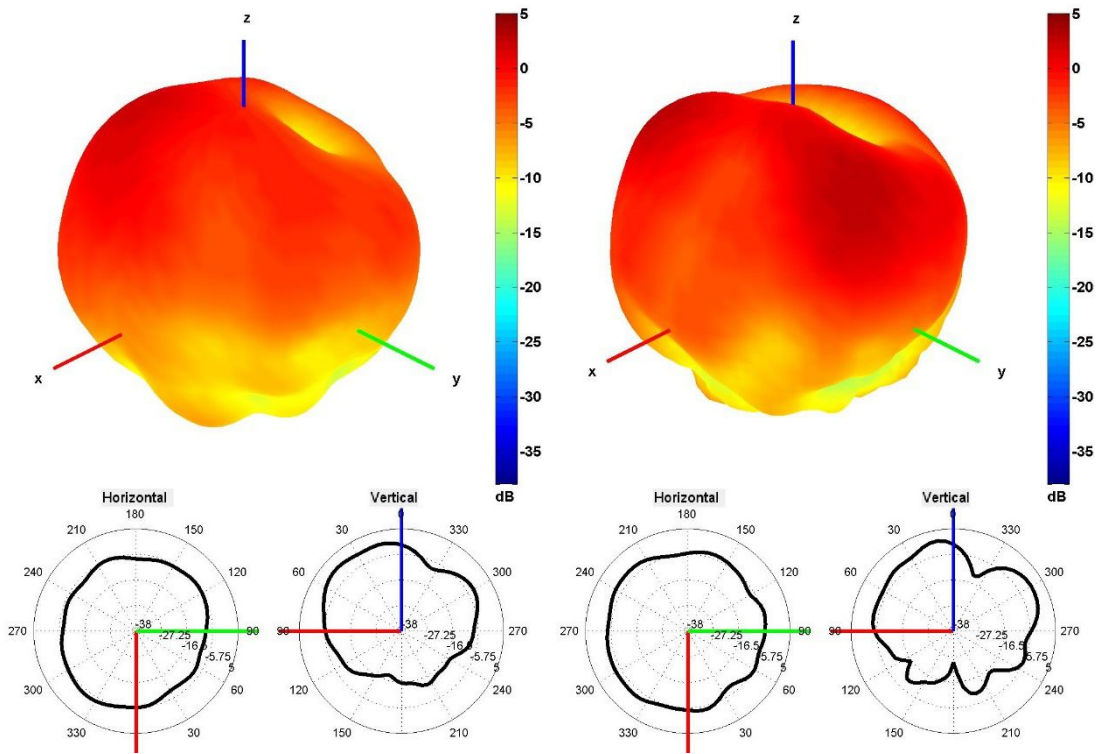


2600 MHz Radiation pattern

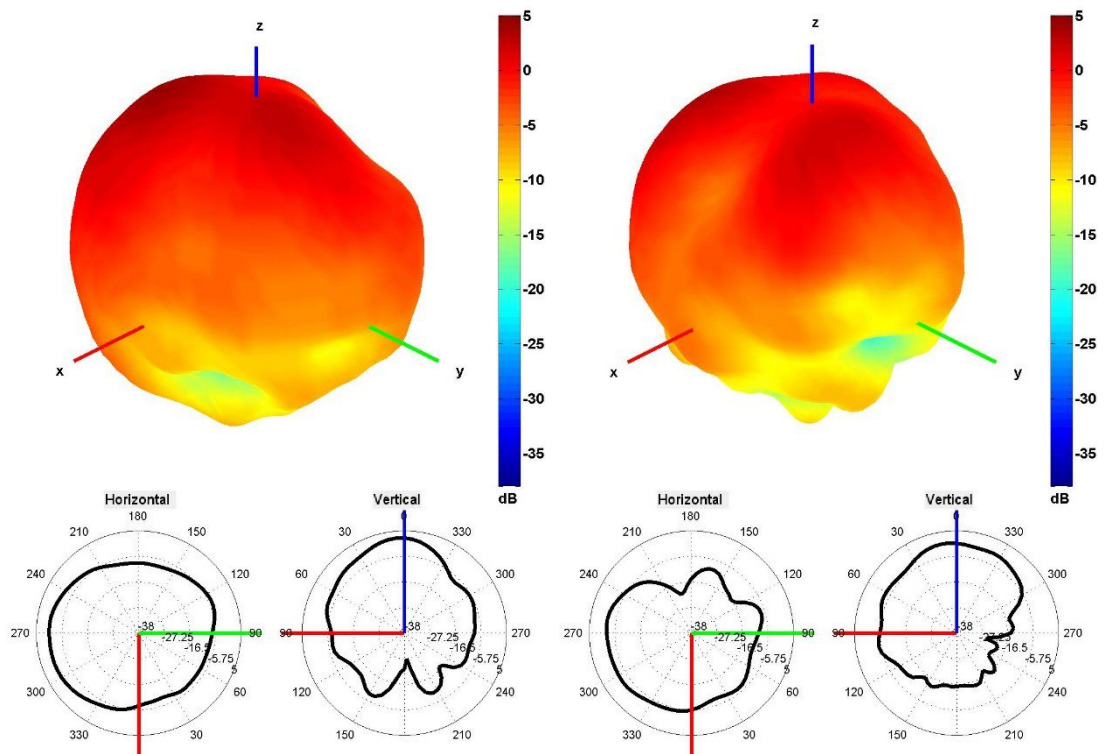
Cable 2: CELLULAR/LTE



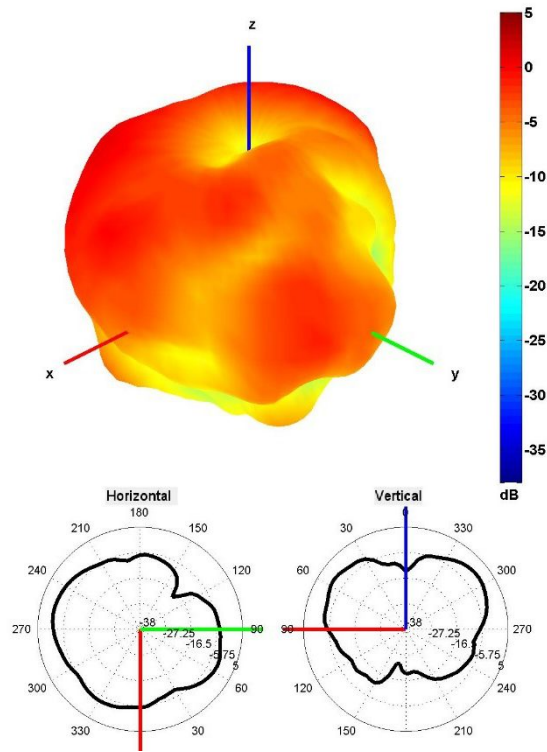
850 and 940 MHz Radiation pattern



1750 and 1850 MHz Radiation pattern

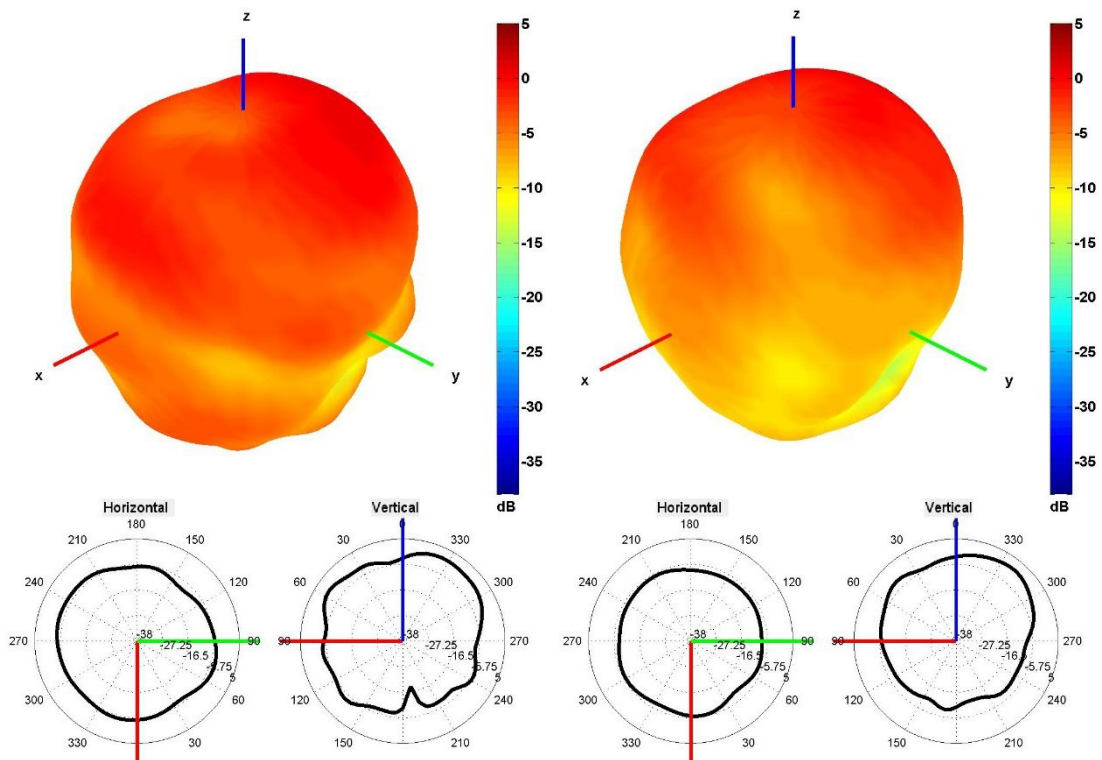


1950 and 2100 MHz Radiation pattern



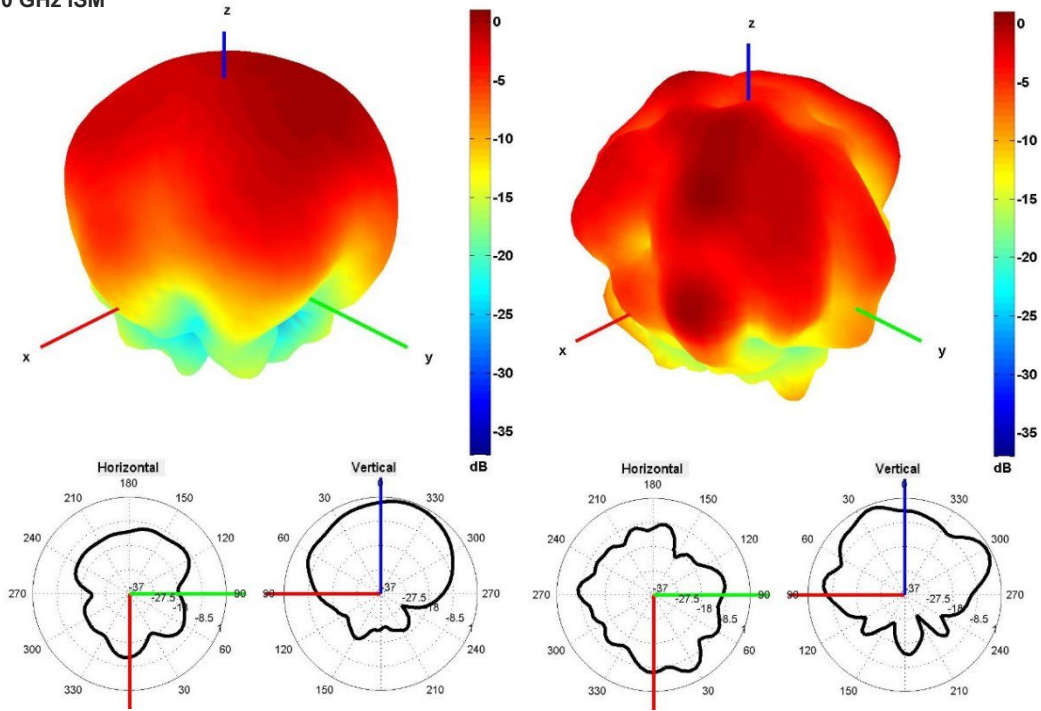
2600 MHz Radiation pattern

Cable 3: 2.4/5.0 GHz ISM



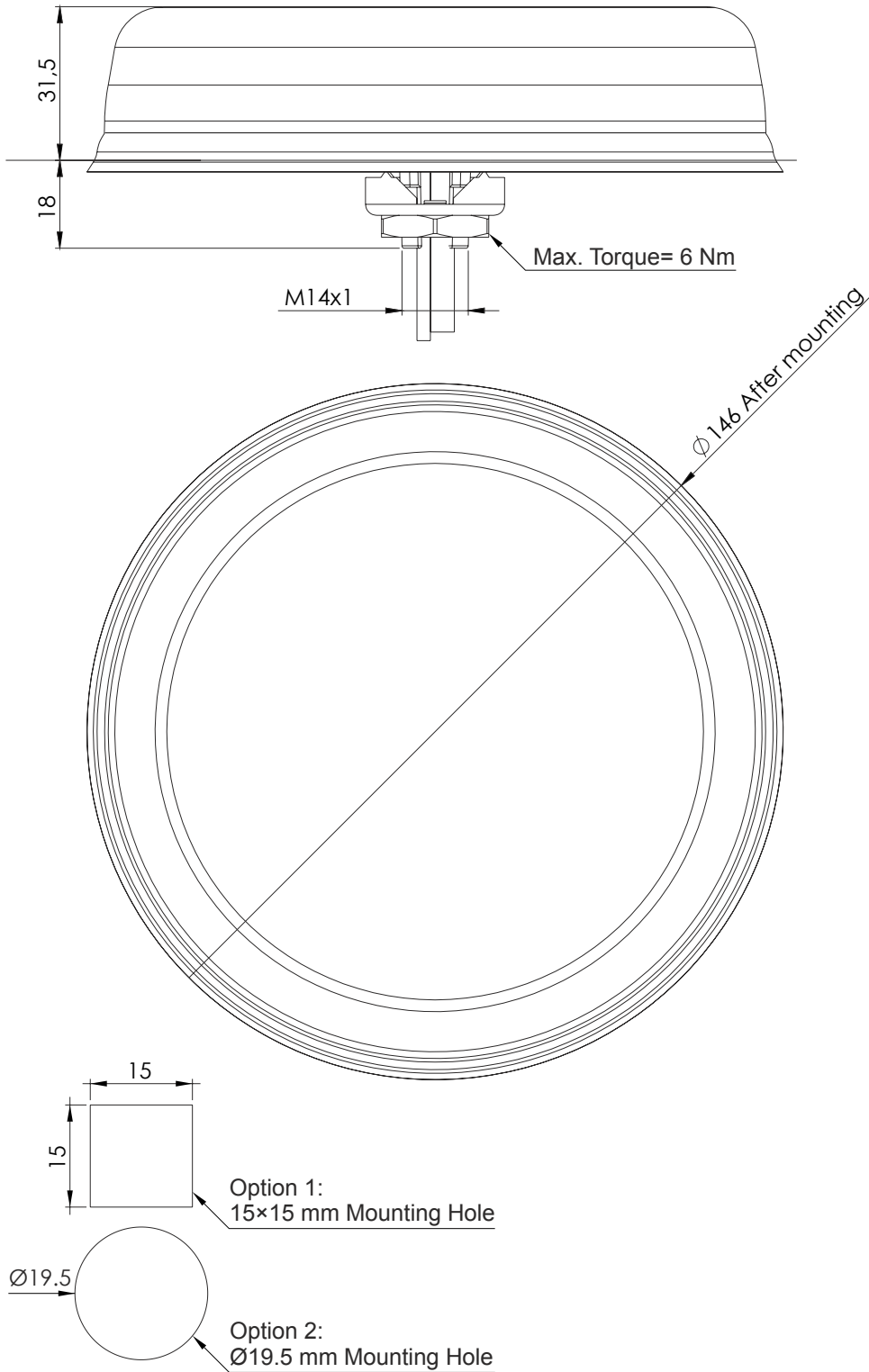
2450 and 5500 MHz Radiation pattern

Cable 4: 2.4/5.0 GHz ISM



2450 and 5500 MHz Radiation pattern

4. Antenna drawings



Note: Dimensions are in millimeters
***Dimensions are after mounting**
****Max. Torque= 6 Nm**

5. Antenna Images

